## AMENDEMENTS TO THE CLAIMS

Claims 1-32 (Canceled)

33. (New) A transgenic mouse whose genome comprises a homozygous disruption in endogenous mouse brain-specific membrane anchored protein (BSMAP) gene, wherein the transgenic mouse exhibits increased prepulse inhibition, relative to a wild-type mouse.

34. (New) The transgenic mouse of claim 33, wherein the increased prepulse inhibition is observed after a 100 decibel prepulse.

35. (New) A cell or tissue obtained from the transgenic mouse of claim 33.

36. (New) A transgenic mouse comprising a heterozygous disruption in endogenous mouse BSMAP gene, wherein the disruption in a homozygous state inhibits production of functional mouse BSMAP protein resulting in a transgenic mouse exhibiting increased prepulse inhibition, relative to a wild-type mouse.

37. (New) The transgenic mouse of claim 36, wherein the increased prepulse inhibition is observed after a 100 decibel prepulse.

38. (New) A method of producing a transgenic mouse comprising a disruption in endogenous mouse BSMAP gene, the method comprising:

    (a) introducing a targeting construct capable of disrupting mouse BSMAP gene into a mouse embryonic stem cell;

    (b) introducing the resulting mouse embryonic stem cell into a blastocyst;

    (c) implanting the resulting blastocyst into a pseudopregnant mouse, wherein the pseudopregnant mouse gives birth to a chimeric mouse; and

    (d) breeding the chimeric mouse to produce the transgenic mouse;

    wherein where the disruption is homozygous, the transgenic mouse exhibits increased prepulse inhibition, relative to a wild-type mouse.

39. (New) The transgenic mouse produced by the method of claim 38.

40. (New) A targeting construct capable of disrupting a mouse BSMAP gene, the targeting construct comprising:

    (a) a first polynucleotide sequence homologous to a mouse BSMAP gene;

    (b) a second polynucleotide sequence homologous to the mouse BSMAP gene; and

    (c) a selectable marker.

wherein the targeting construct, when introduced into a mouse embryonic stem cell, results in production of a transgenic mouse whose genome comprises a disruption in the mouse BSMAP gene, wherein the transgenic mouse exhibits increased prepulse inhibition, relative to a wild-type mouse.

41. (New) The targeting construct of claim 40, wherein the targeting construct further comprises a screening marker.

42. (New) A method of producing a targeting construct capable of disrupting a mouse BSMAP gene, the method comprising:

(a) providing a first polynucleotide sequence homologous to a mouse BSMAP gene;

(b) providing a second polynucleotide sequence homologous to the mouse BSMAP gene;

(c) providing a selectable marker; and

(d) inserting the first sequence, second sequence and selectable marker into a vector to produce the targeting construct,

wherein the targeting construct, when introduced into a mouse embryonic stem cell, results in production of a transgenic mouse whose genome comprises a disruption in the mouse BSMAP gene, wherein the transgenic mouse exhibits increased prepulse inhibition, relative to a wild-type mouse.

43. (New) A method of producing a targeting construct capable of disrupting a mouse BSMAP gene, the method comprising:

(a) providing a polynucleotide comprising a first sequence homologous to a first region of a mouse BSMAP gene and a second sequence homologous to a second region of the mouse BSMAP gene; and

(b) inserting a positive selection marker between the first and second sequences to form the targeting construct,

wherein the targeting construct, when introduced into a mouse embryonic stem cell, results in production of a transgenic mouse whose genome comprises a disruption in the mouse BSMAP gene, wherein the transgenic mouse exhibits increased prepulse inhibition, relative to a wild-type mouse.

44. (New) A murine embryonic stem cell transformed with the targeting construct of claim 40.

45. (New) A method of identifying an agent that modulates prepulse inhibition, the method comprising:

(a) administering a test agent to a transgenic mouse comprising a homozygous disruption in endogenous mouse BSMAP gene, wherein the transgenic mouse exhibits increased prepulse inhibition; and

(b) determining whether the test agent modulates prepulse inhibition in the transgenic mouse.

46. (New) A method of identifying a potential therapeutic agent for the treatment of schizophrenia, the method comprising:

(a) administering the potential therapeutic agent to a transgenic mouse comprising a homozygous disruption in endogenous mouse BSMAP gene, wherein the transgenic mouse exhibits increased prepulse inhibition; and

(b) determining whether the potential therapeutic agent modulates prepulse inhibition in the transgenic mouse, wherein modulation of seizure susceptibility identifies a potential therapeutic agent for the treatment of schizophrenia.